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REPRODUCTION ABILITY OF RECIPROCAL CROSSBREED Fl GENERATION BY ,t· SHEEP OF MUTTON MERINO OF GERMAN TYPE AND BY RAHS OF THE BREED KENT /ROMNEY MARSH

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REPRODUCTION ABILITY OF RECIPROCAL CROSSBREED F_1 GENERATION BY SHEEP OF MUTTON MERINO OF GERMAN TYPE AND BY RAMS OF THE BREED KENT /ROMNEY MARSH/.

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AIM

Using the initial breeds which have been followed since 1970 we are creating a Czech Merino Breed with utility combined of fertility, meat, woll and milk, which might be suitable for conditions in Central Europe.

DOCUMENTATION

Results of reciprocal crossbreed in the followed initial parental breeds: The experimental and control groups of ewes were kept in the same flock, i.e. in the approximately same zoo-veterinary and natural conditions. In comparison with rams of the Mutton Merino breed, the Kent rams increased the average conception rate of the Mutton Merino ewes by 12,0 % /96,0 % in the experimental and 84,0% in the control group/ and their average fertility by 29,77 % /141,67 % in the experimental and 111,90 % in the control group/. The mortality of lambs from birth to the 120 th day of age was 10,87 % in the control group and 2,94 % in the experimental group /i.e. less by 7,93 %/. The total mortality of lambs /including abortions/ was 12,77 % in the control and 2,94 % in the experimental group /i.e. less by 9,83 %/. The number of lambs reared from one ewe mated was 0,89 in the control and 1,35 in the experimental group /i.e. more by 0,46/. The number of lambs reared per pregnant ewe was 1,06 and 1,39 in the control and experimental groups, respectively, /i.e. more by 0,33 lambs in the experimental group/, Cumlivski 1978.

MATERIAL AND METHODS

We have been closely following the reproduction of 50 the very same average reciprocal ewe-crossbreeds mated with, 5 ram-cross-

breeds over the 1st to 5th period lambing periods. As with their parents no hormones nor any other interference has been used for influencing the ovulation.

Average day allowance of feed for the ewe contained 2,695 kg of dry substance, 0,137 kg digestible proteins and 1,102 kg starch units. During the period of pasture permanent and occasional grazing sources were thorouhgly exploited.

RESULTS

We have collected an extensive amount of material concerning the utility of the followed population which will be gradually elaborated. In this elaboration we shall compare the reproduction of reciprocal ewe-crossbreeds and the number of lambs reared up the age of 120 days /in the 1 - 5 lambing/.

After the first mating 92,6 per cent /$\pm$ 88,0 - 95,5 per cent/ of ewes got pregnant and after the second all the rest of ewes 7,4 per cent /$\pm$ 4,5 - 12,0 percent/ got pregnant.

This means that for the purpose of petting the ewes pregnant they were mated 1,08 times /$\pm$ 1,04 - 1,12 times/.

No abortions with ewes were registered /Table I/.

DISCUSSION

A relatively high fertility was found with sheep /160,4 pc/. As compared with the fertility of their mothers they achieved higher fertility by 18,73 p.c., compared with the Finnish breed by 7,4 p.c. and compared with the Eastfriesian breed by 26,4 p.c. In view of a low mortality of lambs /1,4 p.c./ the percentage of lambs reared was high /1,590 p.c./.The ewe-crossbreeds produce a higher number of lambs namely: compared with their mothers the number of lambs reared was 0,200, compared with the Finnish breed the number of lambs reared was 0,295 and compared with the Eastfriesian breed it was 0,490 lambs reared. Only compared with the Romanov breed do the followed ewe-crossbreeds show a lower indicator namely: in fertility by 31,6 per cent and the number of lambs reared was 0,332 /Cumlivski 1978, 1986a, 1986b/.

CONCLUSION

For the purpose of getting the ewes pergnant the ewe-crossbreeds

were mated 1,08 times /± 1,045 - 1,12 times/ on the average. No abortins were registered. The fertility was 153,2 per cent of ewes mated /± 140,0 - 160,0 per cent/ and out of the number of ewes pregnant it was 160,4 per cent /± 148,0 - - 170,0 per cent/. The mortality of lambs up to the age of 120 days was 1,4 per cent, /± 0,6 - 2,0 per cent/. The number of lambs reared was: out of the number of mated lambs it was 1,517 and out of the number of pregnant ewes it was 1,590 /± 1,460 - 1,688/.

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Table I. Reproduction Abilities of crossbred F_1 generation by sheep / in per cent. and in heads /

Index	1 st lambing	2 nd lambing	3 rd lambing	4 th lambing	5 th lambing	Average 1 st-5th lambing
Number of sheep under study = 100 %	50,0	50,0	50,0	50,0	50,0	50,0
Fertility per number of mated ewes	140,0	150,0	160,0	160,0	156,0	153,2
Fertility per number of pregnant ewes	148,0	156,0	170,0	168,0	160,0	160,4
Mortality of lambs (including abortions) up to 120 days	2,0	1,9	1,2	0,6	1,3	1,4
Number of lambs reared per one mated ewe	1,380	1,481	1,588	1,594	1,542	1,517
Number of lambs reared per one ewe in gestation	1,460	1,541	1,688	1,674	1,587	1,590
Sex of lambs (♀ : ♂)	48,5:51,5	50,8:49,2	52,0:48,0	49,5:50,5	50,0:50,0	50,16:49,84